Avenview

Touchboards

205 Westwood Ave, Long Branch, NJ 07740
Phone: 866-94 BOARDS (26273) / (732)-222-1511
Fax: (732)-222-7088 | E-mail: sales@touchboards.com

USER GUIDE

1X8 HDMI 1.3 Extender / Splitter over Single CAT5 with 3D Support and Local Output

Model #: HDM3D-C5SP-8

3D FULL HD

HD ready 1080p

HDMI HDCP

7.1CH Audio

© 2012 Avenview Inc. All rights reserved.
The contents of this document are provided in connection with Avenview Inc. ("Avenview") products. Avenview makes no representations or warranties with respect to the accuracy or completeness of the contents of this publication and reserves the right to make changes to specifications and product descriptions at any time without notice. No license, whether express, implied, or otherwise, to any intellectual property rights is granted by this publication. Except as set forth in Avenview Standard Terms and Conditions of Sale, Avenview assumes no liability whatsoever, and disclaims any express or implied warranty, relating to its products including, but not limited to, the implied warranty of merchantability, fitness for a particular purpose, or infringement of any intellectual property right. Reproduction of this manual, or parts thereof, in any form, without the express written permission of Avenview Inc. is strictly prohibited.

Table of Contents

Section 1: Getting Started 3

1.1 Important Safeguards 3

1.2 Safety Instructions 3

1.3 Regulatory Notices Federal Communications Commission (FCC) 4

1.4 Introduction 4

1.5 Package Contents 4

1.6 Before Installation 5

1.7 Panel Description 6

1.7.1 Front Panel 6

1.7.2 Rear Panel 6

1.8 EDID Learning 7

1.9 Installation 7

Section 2: Specifications 8

2.1 HDMI Pin Definition 9

2.2 CAT5/6 Pin Definition 9

Section 1: Getting Started

1.1 Important Safeguards

Please read all of these instructions carefully before you use the device. Save this manual for future reference.

What the warranty does not cover

- Any product, on which the serial number has been defaced, modified or removed.
- Damage, deterioration or malfunction resulting from:
    - Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
    - Repair or attempted repair by anyone not authorized by us.
    - Any damage of the product due to shipment.
    - Removal or installation of the product.
    - Causes external to the product, such as electric power fluctuation or failure.
    - Use of supplies or parts not meeting our specifications.
    - Normal wear and tear.
    - Any other causes which does not relate to a product defect.
- Removal, installation, and set-up service charges.

1.2 Safety Instructions

The Avenview HDM3D-C5SP-8 HDMI 1.3 Extender / Splitter over CAT5 with Full 3D Support and Local Output has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipment's, the HDM3D-C5SP-8 should be used with care. Read the following safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Do not dismantle the housing or modify the module.
- Dismantling the housing or modifying the module may result in electrical shock or burn.
- Refer all servicing to qualified service personnel.
- Do not attempt to service this product yourself as opening or removing housing may expose you to dangerous voltage or other hazards
- Keep the module away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- Have the module checked by a qualified service engineer before using it again.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

1.3 Regulatory Notices Federal Communications Commission (FCC)

This equipment has been tested and found to comply with Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

Any changes or modifications made to this equipment may void the user's authority to operate this equipment.

1.4 Introduction

The Avenview HDM3D-C5SP-8 HDMI 1.3 over Single CAT5 Splitter Extender with 3D Support and Local Output provides the most flexible solution by which the high definition video and high quality audio can be transmitted to different locations over a long distance. These devices can cascade, allowing you to extend HDMI compliant displays almost anywhere. The input HDMI source can be duplicated and distributed to up to 8 HDMI enable displays through cost effective Cat-5/5e cables and RJ-45 to HDMI mini-extenders HDM3D-C5-R-M or Long Range HDM-C53X-R. With the built in equalization, the input HDMI cable can be extended up to 20 meters (66 feet) long under Full HD, and make the overall transmission distance superior than regular HDMI splitters or matrix switches in the market. With use of Long Range Receiver, HDMI signal can be extended to 50 meters (165 feet).

- Supports HDMI Deep Color & Full 3D
- HDMI 1.3c compliant
- HDCP compliant
- Regenerates the HDMI signal
- HDMI local output
- Supports default HDMI EDID and has the ability to learn the EDID of the displays
- Extends up to 20m (66ft) of input HDMI cable with Mini Receiver
- Extends up to 60m (200ft) (720p / 1080i) of output CAT5/6 cable with Long Range Receiver
- Extends up to 40m (130ft) (1080p) of output CAT5/6 cable
- Pure unaltered uncompressed 7.1ch digital HDMI over LAN cable transmission
- Allows cascading
- Perfectly integrated with other HDM-C5XD Series products

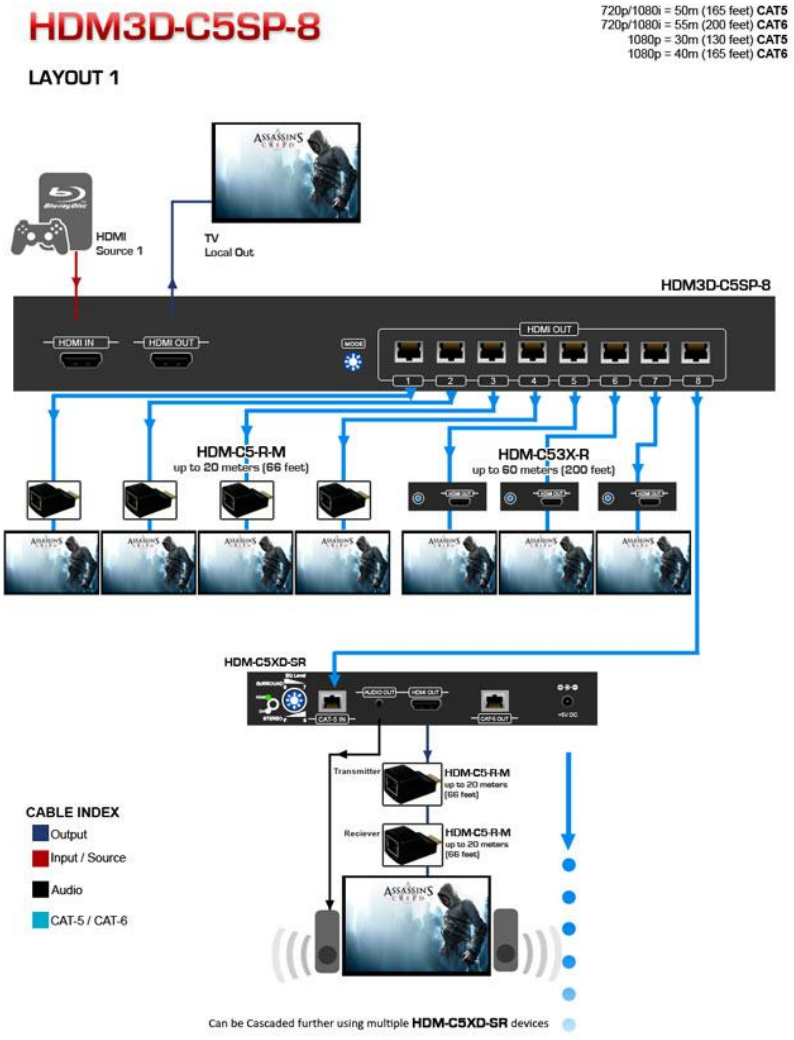
1.5 Package Contents

Before you start the installation of the converter, please check the package contents.

- HDM3D-C5SP-8 x 1
- Power Adapter (+5VDC, 4A) x 1
- Rack-mounting Ear Set x 1
- User's Manual x 1

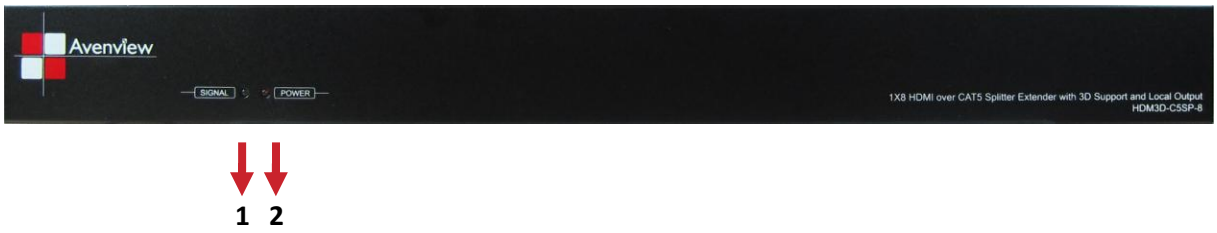
1.6 Before Installation

- Put the product in an even and stable location. If the product falls down or drops, it may cause an injury or malfunction.
- Don't place the product in too high temperature (over 50°C), too low temperature (under 0°C) or high humidity.
- Use the DC power adapter with correct specifications. If inappropriate power supply is used then it may cause a fire.
- Do not twist or pull by force ends of the optical cable. It can cause malfunction.



1.7 Panel Description

1.7.1 Front Panel



1.7.2 Rear Panel

1. **Signal:** **Bright = HDMI Source Signal is Detected** **Dark = No HDMI Signal**	2. **Power:** **Bright = Power On** **Dark = Power Off**
3. **Power: On / Off Switch**	4. **+5V DC: Interlocking Power Jack for 5V DC Power Supply**
5. **HDMI Input**	6. **HDMI Local Output**
7. **Mode***	8. **HDMI CAT5/6 Output**

Mode*

* *0 = [Video] –2D / Full-HD 24bit 1080p@60 [Audio] – up to 7.1ch surround sound*

1 = [Video] –2D / Full-HD 24bit 1080p@60 [Audio] – up to 2.0ch surround sound

2 = [Video] –2D / Full-HD 36bit 1080p@60 [Audio] – up to 7.1ch surround sound

3 = [Video] –2D / Full-HD 36bit 1080p@60 [Audio] – up to 2.0ch surround sound

4 = [Video] –2D / HD 24bit (1080p@30)(1080i@60)(720p@60) [Audio] – up to 7.1ch surround sound

5 = [Video] –2D / HD 24bit (1080p@30)(1080i@60)(720p@60) [Audio] – up to 2.0ch surround sound

6 = [Video] –3D / Full-HD 36bit (1080p@60) [Audio] – up to 2.0ch surround sound

1.8 EDID Learning

1. Power on the HDM3D-C5SP-8. Connect to HDMI OUTPUT with a HDMI Cable to the display you want the HDM3D-C5SP-8 to learn its EDID.

2. To learn the display's EDID from the source device, connect to HDMI OUTPUT. Set the mode to position”7”. Power on and wait for about 6-8 seconds to complete the EDID learning process;

NOTE: ***Not necessary to power cycle again or even twice while plugging on different displays.***

1.9 Installation

To setup Avenview HDM3D-C5SP-8 follow these steps for connecting to a device:

1. Turn off all devices including monitors / TV
2. Connect to a HDMI source (such as a Blu-Ray Disc player) to HDMI Input of HDM3D-C5SP-8
3. Connect the receiver HDM-C53X-R or HDM-C5-R-M to HDM3D-C5SP-8 from RJ45 Out with CAT5 / CAT6 cable
4. Plug in 5V 4A DC Power (supplied).
5. Power on the HDMI display
6. Power on HDMI Sources.

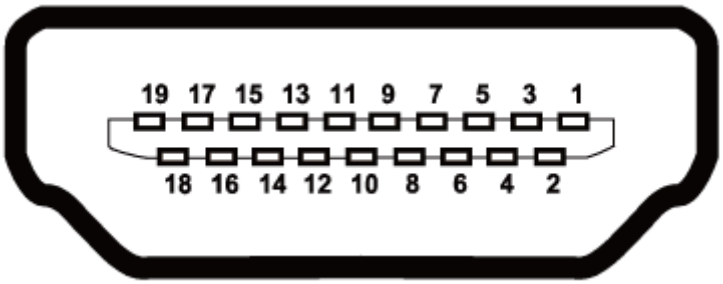
Section 2: Specifications

Item	Description
Units	HDM3D-C5SP-8
Unit Description	1 X8 HDMI Transmitter / Splitter over CAT5 / CAT6 with Full 3D Support
HDMI Compliance	HDMI Deep Colour & Full 3D
HDCP Compliance	Yes
Video Bandwidth	Single Link 225 MHz (6.75Gbps)
Supported Resolutions	480i / 480p / 720p / 1080i / 1080p60
Resolution and Distance	**Full HD:** (1080p) ~ 40meter (130feet) (CAT5e) / 50meter (165feet) (CAT6) **HD:** (720p/1080i) ~ 50meter (165feet) (CAT5e) / 60meter (200feet) (CAT6)
Audio Support	Surround Sound (up to 7.1 Ch) or Stereo Digital Audio
Equalization	Built-in
Input TMDS Signal	1.2 Volts (peak-to-peak)
Input DDC Signal	5 Volts (peak-to-peak, TTL)
ESD Protection	- Human body model — ±15kV (air-gap discharge) & ±8kV (contact discharge) - Core chipset — ±8kV
Input	1 x HDMI
Output	8 x Rj45 1 x HDMI
HDMI Connector	Type A (19 pin female)
RJ45 Connector	WE/SS 8P8C
Dimensions (L x W x H)	6.2” x 17.2” x 1.7”
Power Supply	5V 4A DC
Power Consumption	13 Watt (max)

Environmental

Operating Temperature	32˚ ~ 104˚F (0˚ to 40˚C)
Storage Temperature	-4˚ ~ 140˚F (-20˚ ~ 60˚C)
Relative Humidity	20~90% RH (no condensation)

2.1 HDMI Pin Definition

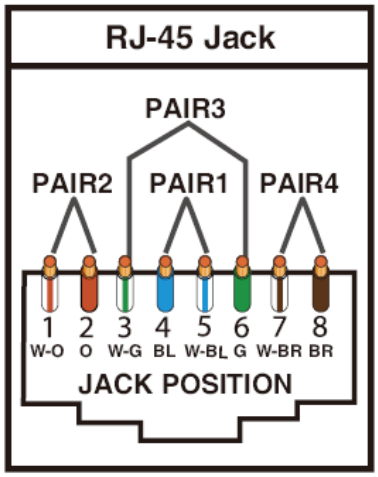


Type A (Receptacle) HDMI

Pin 1	TMDS Data2+	**Pin 11**	TMDS Clock Shield
Pin 2	TMDS Data2 Shield	**Pin 12**	TMDS Clock–
Pin 3	TMDS Data2–	**Pin 13**	NC
Pin 4	TMDS Data1+	**Pin 14**	Reserved (N.C. on device)
Pin 5	TMDS Data1 Shield	**Pin 15**	SCL
Pin 6	TMDS Data1–	**Pin 16**	SDA
Pin 7	TMDS Data0+	**Pin 17**	DDC/CEC Ground
Pin 8	TMDS Data0 Shield	**Pin 18**	+5V Power
Pin 9	TMDS Data0–	**Pin 19**	Hot Plug Detect
Pin 10	TMDS Clock+		

2.2 CAT5/6 Pin Definition

Data Link TIA/EIA-568-B		
PIN	Color	Function
1	W-O	TX0-
2	O	TX0+
3	W-G	TX1-
4	BL	TX2-
5	W-BL	TX2+
6	G	TX1+
7	W-BR	TXC-
8	BR	TXC+



Notice

1. *The length depends on the characteristics and quality of the cables. Higher resolutions and longer transmission distances require low skew cables (<25ns/100m) for best performance. Unshielded CAT6 with metal RJ-45 connectors is recommended.*

Performance Guide for HDMI over CAT 5/6 Cable Transmission

Performance rating		Type of category cable		
Wiring	**Shielding**	**CAT5**	**CAT5e**	**CAT6**
Solid	Unshielded (UTP)	★★★	★★★★	★★★★★
	Shielded (STP)	★★★	★★★	★★★★
Stranded	Unshielded (UTP)	★	★★	★★
	Shielded (STP)	★	★	★★
Termination		Please use **EIA/TIA-568-B** termination (**T568B**) at any time		

Touchboards
205 Westwood Ave, Long Branch, NJ 07740
Phone: 866-94 BOARDS (26273) / (732)-222-1511
Fax: (732)-222-7088 | E-mail: sales@touchboards.com

Disclaimer

While every precaution has been taken in the preparation of this document, Avenview Inc. assumes no liability with respect to the operation or use of Avenview hardware, software or other products and documentation described herein, for any act or omission of Avenview concerning such products or this documentation, for any interruption of service, loss or interruption of business, loss of anticipatory profits, or for punitive, incidental or consequential damages in connection with the furnishing, performance, or use of the Avenview hardware, software, or other products and documentation provided herein.

Avenview Inc. reserves the right to make changes without further notice to a product or system described herein to improve reliability, function or design. With respect to Avenview products which this document relates, Avenview disclaims all express or implied warranties regarding such products, including but not limited to, the implied warranties of merchantability, fitness for a particular purpose, and non-infringement.